REMARKS

Claims 1-7 are pending in this application.

Claims 1 and 7 have been amended. Amended claims 1 and 7 do not introduce any new subject matter.

REJECTIONS UNDER 35 U.S.C. § 102:

Reconsideration is respectfully requested of the rejections of claims 1, 3 and 5 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,642,149 to Suemasa et al. ("Suemasa").

Applicants respectfully submit that Suemasa does not disclose or suggest a mixed voltage comprising $E_1\cos(\omega_1 t)$ for generating plasma and $E_1+(E_2-E_1)\cos(\omega_2 t)$ for adjusting etching conditions when the main frequency is substantially larger than the bias frequency, as recited in amended claim 1. Therefore, Applicants respectfully submit that amended claim 1 is not anticipated by Suemasa. In addition, for at least the reason that claims 3 and 5 depend from claim 1, claims 3 and 5 are also not anticipated by the cited reference.

Amended claim 1 recites a mixed voltage comprising $E_1\cos(\omega_1 t)$ for generating plasma and $E_1+(E_2-E_1)\cos(\omega_2 t)$ for adjusting etching conditions. In contrast, Suemasa discloses single frequencies of 380 kHz, 3 MHz, and 13.56 MHz respectively applied to a lower electrode. (See, e.g., col. 4, lines 20-58). Thus, Suemasa does not disclose the mixed voltage comprising $E_1\cos(\omega_1 t)$ for generating plasma and $E_1+(E_2-E_1)\cos(\omega_2 t)$ for adjusting etching conditions.

Therefore, Applicants respectfully request that Examiner withdraw the rejection of claims 1, 3 and 5 under 35 U.S.C. § 102(e) and that claims1, 3 and 5 are in condition for allowance.

REJECTIONS UNDER 35 U.S.C. § 103:

Claims 1-7

Reconsideration is respectfully requested of the rejections of claims 1-7 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,309,978 B1 to Donohoe et al. ("Donohoe") in view of U.S. Patent Pub. No. US2003/0094239 A1 to Quon et al. ("Quon").

Applicants respectfully submit that the amendment to independent claims 1 and 7 renders claims 1 -7 patentable over the cited references.

Applicants respectfully submit that Donohoe and Quon, when taken alone or in combination, fail to teach or suggest a mixed voltage comprising $E_1\cos(\omega_1 t)$ for generating plasma and $E_1+(E_2-E_1)\cos(\omega_2 t)$ for adjusting etching conditions when the main frequency is substantially larger than the bias frequency, as recited in amended claims 1 and 7.

Donohoe does not teach these features. Although Donohoe discloses a mixer (37) to provide an output signal, Donohoe does not disclose a mixed voltage comprising $E_1\cos(\omega_1 t)$ for generating plasma and $E_1+(E_2-E_1)\cos(\omega_2 t)$ for adjusting etching conditions.

Further, the addition of Quon does not render the claimed features obvious. Although Quon discloses a VHF voltage and a low frequency RF voltage (see, par. 28), Quon does not disclose a mixed voltage comprising $E_1\cos(\omega_1 t)$ for generating plasma and $E_1+(E_2-E_1)\cos(\omega_2 t)$ for adjusting etching conditions.

Therefore, it is respectfully submitted that the cited references, when taken alone or in combination, do not disclose or suggest the recited features of amended claims 1 and 7. Accordingly, it would not have been obvious to modify Donohoe in view of Quon to develop the embodiment recited in amended claims 1 and 7.

As such, Applicants respectfully submit that amended claims 1 and 7 are patentable over Donohoe in view of Quon.

Further, for at least the reason that claims 2-6 depend from claim 1, claims 2-6 are also submitted to be patentably distinct over the cited references.

Claims 2, 4, 6 and 7

Reconsideration is also respectfully requested of the rejections of claims 2, 4, 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Suemasa in view of Donohoe.

In view of the previous arguments pertaining to the allowability of amended claim 1, Applicants respectfully submit that amended claim 1 is patentable over the cited references.

Claims 2, 4 and 6 depend upon claim 1. These dependent claims are believed to be patentable over Suemasa in view of Donohoe for at least the reason of their dependency on allowable independent claim 1. As such, Applicants respectfully submit that claims 2, 4 and 6 are patentable over Suemasa in view of Donohoe.

As such, Applicants respectfully submit that claims 2, 4 and 6 are patentable over Suemasa in view of Donohoe.

Applicants respectfully submit that Donohoe and Suemasa, when taken alone or in combination, fail to teach or suggest a mixed voltage comprising $E_1\cos(\omega_1 t)$ for generating plasma and $E_1+(E_2-E_1)\cos(\omega_2 t)$ for adjusting etching conditions when the main frequency is substantially larger than the bias frequency, as recited in amended claim 7.

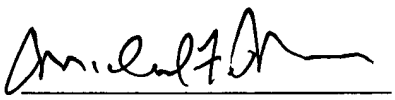
Donohoe does not teach these features. Although Donohoe discloses a mixer (37) to provide an output signal, Donohoe does not disclose a mixed voltage comprising $E_1\cos(\omega_1 t)$ for generating plasma and $E_1+(E_2-E_1)\cos(\omega_2 t)$ for adjusting etching conditions.

Further, the addition of Suemasa does not render the claimed features obvious. In contrast, as stated above Suemasa discloses single frequencies of 380 kHz, 3 MHz, and 13.56 MHz respectively applied to a lower electrode. (See, e.g., col. 4, lines 20-58). Thus, Suemasa does not disclose the mixed voltage comprising $E_1\cos(\omega_1 t)$ for generating plasma and $E_1+(E_2-E_1)\cos(\omega_2 t)$ for adjusting etching conditions.

Therefore, based on the foregoing, Applicants respectfully request that the Examiner withdraw the rejections of claims 2, 4, 6 and 7 under 35 U.S.C. § 103(a) and that claims 2, 4, 6 and 7 are in condition for allowance.

An early and favorable reconsideration is earnestly solicited. If the Examiner has any further questions or comments, the Examiner may telephone Applicants' Attorney to reach a prompt disposition of this application.

Respectfully submitted,



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